AMENDMENTS TO THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as shown below. This listing of claims replaces all previous versions and listings of claims in the present patent application.

Listing of Claims

1. – 10. (Cancelled)

11. (Currently Amended) A relay server ~~of a service delivery system, in which~~ configured to establish a session initiation protocol (SIP) session ~~is established~~ between a client terminal and an application server ~~over a network through the relay server, and in which, after the SIP session is established~~ in a service delivery system, wherein the application server ~~delivers~~ is configured to deliver a service ~~directly to the client terminal over the network via an application session different from the SIP session~~ other than Internet telephony, the relay server comprising:

    a receiver;

    a controller;

    a memory; and

    a transmitter, wherein:

        a requester ~~that~~ receives, by [[a]] the receiver, an SIP session establishment request ~~over the network~~, from the client terminal, including service request information of the client terminal, the service request information comprising request information for the service

other than Internet telephony delivered by the application server, and the SIP session establishment request comprising an SIP INVITE message;

an authenticator ~~that~~ controls, by [[a]] the controller, registration information of the client terminal, and authenticates the client terminal based on the service request information and the registration information;

a searcher ~~that~~ searches [[a]] the memory in the relay server for the application server that delivers the service included in the service request information;

a service inquiry relayer ~~that~~ relays, by [[a]] the transmitter, the SIP session establishment request ~~over the network~~, to the searched application server, in order to inquire of the searched application server whether it is possible to deliver the service to the client terminal;

a response relayer ~~that~~ receives, by the receiver, an SIP response to the inquiry ~~over the network~~, from the application server, and sends, by the transmitter, the SIP response to the client terminal ~~over the network~~, the SIP response including information for establishing, between the client terminal and the application server, an application session that is different from the SIP session, the information being related to an access method of accessing the service other than Internet telephony provided by the application server, and the SIP response comprising an SIP INVITE response; and

a confirmation relayer ~~that~~ relays an SIP confirmation request, received by the receiver, to the application server ~~over the network when~~ after the confirmation relayer receives the SIP confirmation request from the client terminal ~~over the network~~ according to the SIP response, in order to establish the SIP session between the client terminal and the application server ~~over the network~~, the SIP confirmation request comprising an SIP ACK message

~~wherein the SIP session continues while the service is delivered from the application~~
~~server to the client terminal via the application session.~~

12. (Previously Presented) The relay server of claim 11, wherein service content and client information are specified based on rules according to data included in the service request information.

13. (Currently Amended) The relay server of claim 11, further comprising:

a disconnection requester that receives a disconnection request from the client terminal and sends the disconnection request to the application server, the disconnection request comprising an SIP BYE message;

a session controller that measures a duration of the SIP session ~~when~~ after the SIP session is disconnected, based on the disconnection request; and

a time biller that creates billing information based on the measured duration.

14. (Previously Presented) The relay server of claim 11, further comprising:

an application biller that creates billing information based on a request from the application server.

15. (Currently Amended) The relay server of claim 11, further comprising:

a change requester that receives a session change request including service change information of the client terminal for the established SIP session, from the client terminal, the service change information being change information for the service other than Internet

telephony provided by the application server, and the session change request comprising one of an SIP UPDATE message and an SIP re-INVITE message, wherein:

the searcher searches an application server that delivers a changed service included in the service change information, in response to the session change request, and

the service inquiry relayer relays the session change request, to the searched application server, in order to inquire of the searched application server whether it is possible to deliver the changed service to the client terminal.

16. (Currently Amended) The relay server of claim 11, further comprising:

a transfer requester that receives a session transfer request including service request information of the client terminal for the established SIP session, from the client terminal, the session transfer request comprising one of an SIP INVITE message and an SIP REFER message, wherein:

the searcher searches a second application server that delivers the service included in the service request information, in response to the session transfer request,

the service inquiry relayer relays the session transfer request, to the searched second application server, in order to inquire of the searched second application server whether it is possible to deliver the service to the client terminal, and

the response relayer receives an SIP response to the inquiry, from the second application server, and sends the SIP response to the client terminal.

17. (Currently Amended) The relay server of claim 11, wherein:

the searcher searches at least one application server that delivers the service other than Internet telephony included in the service request information,

the service inquiry relayer relays the SIP session establishment request to the searched at least one application server, in order to inquire of the searched at least one application server whether it is possible to deliver the service to the client terminal,

the response relayer receives an SIP response to the inquiry, from each of the searched at least one application server, and sends the SIP response to the client terminal, and

~~when~~ after the confirmation relayer receives an SIP confirmation request from the client terminal according to the SIP response from each of the searched at least one application server, the confirmation relayer relays the SIP confirmation request to the searched at least one application server, in order to establish the SIP session between each of the searched at least one application server and the client terminal, for one SIP session establishment request.

18. (Currently Amended) A service control method for a relay server ~~in a service delivery system, in which~~ configured to establish a session initiation protocol (SIP) session ~~is established~~ between a client terminal and an application server ~~over a network through the relay server, and in which, after the SIP session is established~~ in a service delivery system, wherein the application server ~~delivers~~ is configured to deliver a service ~~directly to the client terminal over the network via an application session different from the SIP session~~ other than Internet telephony, the service control method comprising:

receiving, by a receiver of the relay server, an SIP session establishment request ~~over the network~~, from the client terminal, including service request information of the client terminal, at

a requester in the relay server, the service request information comprising request information for the service other than Internet telephony delivered by the application server, and the SIP session establishment request comprising an SIP INVITE message;

authenticating, by a controller in the relay server, the client terminal based on the service request information and previously-registered client information, using an authenticator in the relay server;

searching a memory in the relay server for an application server that delivers the service included in the service request information, using a searcher in the relay server;

relaying, by a transmitter in the relay server, the SIP session establishment request ~~over the network~~, to the searched application server, in order to inquire of the searched application server whether it is possible to deliver the service to the client terminal, at a service inquiry relayer in the relay server;

receiving, by the receiver, an SIP response to the inquiry ~~over the network~~, from the application server, and sending, by the transmitter, the SIP response ~~over the network~~ to the client terminal, using a response relayer in the relay server, the SIP response including information for establishing, between the client terminal and the application server, an application session that is different from the SIP session, the information being related to an access method of accessing the service other than Internet telephony provided by the application server, and the SIP response comprising an SIP INVITE response; and

relaying, by the transmitter, an SIP confirmation request ~~over the network~~ to the application server ~~when~~ after the confirmation relayer receives the SIP confirmation request ~~over the network~~ from the client terminal according to the SIP response, in order to establish the SIP

session between the client terminal and the application server ~~over the network~~, the SIP

confirmation request comprising an SIP ACK message

~~wherein the SIP session continues while the service is delivered from the application~~

~~server to the client terminal via the application session~~.

19. (Currently Amended) A non-transitory computer readable medium that is stored in a

relay server ~~of a service delivery system, in which~~ configured to establish a session initiation

protocol (SIP) session ~~is established~~ between a client terminal and an application server ~~over a~~

~~network through the relay server, and in which, after the SIP session is established~~ in a service

delivery system, wherein the application server ~~delivers~~ is configured to deliver a service ~~directly~~

~~to the client terminal over the network via an application session different from the SIP session~~

other than Internet telephony, the computer readable medium storing a program that causes a

computer to execute:

   receiving, by a receiver of the relay server, an SIP session establishment request ~~over the~~

~~network~~, from the client terminal, including service request information of the client terminal,

the service request information comprising request information for the service other than Internet

telephony delivered by the application server, and the SIP session establishment request

comprising an SIP INVITE message;

   authenticating, by a controller in the relay server, the client terminal based on the service

request information and previously-registered client information;

   searching a memory in the relay server for an application server that delivers the service

included in the service request information;

relaying, by a transmitter in the relay server, the SIP session establishment request ~~over~~ ~~the network~~, to the searched application server, in order to inquire of the searched application server whether it is possible to deliver the service to the client terminal;

receiving, by the receiver, an SIP response to the inquiry ~~over the network~~, from the application server, and sending, by the transmitter, the SIP response ~~over the network~~ to the client terminal, the SIP response including information for establishing, between the client terminal and the application server, an application session that is different from the SIP session, the information being related to an access method of accessing the service other than Internet telephony provided by the application server, and the SIP response comprising an SIP INVITE response; and

relaying, by the transmitter, an SIP confirmation request ~~over the network~~ to the application server ~~when~~ after the confirmation relayer receives the SIP confirmation request ~~over~~ ~~the network~~ from the client terminal according to the SIP response, in order to establish the SIP session between the client terminal and the application server ~~over the network~~, the SIP confirmation request comprising an SIP ACK message

~~wherein the SIP session continues while the service is delivered from the application~~ ~~server to the client terminal via the application session.~~

20. (Cancelled)

21. (Currently Amended) The relay server of claim 11, wherein a response including an indication of an error is sent back to the client terminal ~~indicating an error when~~ after at least one of the authentication and the search fails.

22. (Currently Amended) The relay server of claim 11, wherein:

~~when~~ after the searcher searches a plurality of application servers, the service inquiry relayer relays the SIP session establishment request, to the searched plurality of application servers, in order to inquire of the searched plurality of application servers whether it is possible to deliver the service other than Internet telephony to the client terminal; and

~~when~~ after the response relayer receives an SIP response to the inquiry, from one of the searched plurality of application servers, the response relayer sends ~~this~~ the received SIP response to the client terminal and sends a cancel request to the ~~rest~~ other of the searched plurality of application servers, the cancel request comprising an SIP CANCEL message.

23. (Cancelled)

24. (Currently Amended) The relay server of claim 11, further comprising:

a disconnection requester that receives a disconnection request from the application server and sends the disconnection request to the client terminal;

a session controller that measures a duration of the SIP session ~~when~~ after the SIP session is disconnected in response to the disconnection request; and

a time biller that creates billing information based on the measured duration of the session.

25. (Previously Presented) The relay server of claim 11, further comprising:

a change requester that receives, from the application server, a session change request that includes service change information, for the established SIP session, wherein:

the searcher searches an application server that delivers a changed service included in the service change information, in response to the session change request, and

the service inquiry relayer relays the session change request, to the searched application server, in order to inquire of the searched application server whether it is possible to deliver the changed service to the client terminal.

26. (New) The relay server of claim 11, wherein:

the application session is different from the SIP session;

after the SIP session is established, the application session is established between the application server and the client terminal, based on the information related to the access method, so that the application server delivers the service other than Internet telephony directly to the client terminal via the application session; and

the SIP session continues while the service is delivered from the application server to the client terminal via the application session.